

COUNTY OFFICERS.	
Sheriff	Wm. E. Chubb
Clerk	James W. Hartwick
Register	John L. Hartwick
Treasurer	John L. Hartwick
Prosecuting Attorney	Edmund J. Hartwick
Justice of the Peace	J. C. Hartwick
Surveyor	Wm. E. Chubb
SUPERVISORS.	
1st Ward	Thos. W. Hartwick
2nd Ward	John L. Hartwick
3rd Ward	John L. Hartwick
4th Ward	John L. Hartwick
5th Ward	John L. Hartwick
6th Ward	John L. Hartwick
7th Ward	John L. Hartwick
8th Ward	John L. Hartwick
9th Ward	John L. Hartwick
10th Ward	John L. Hartwick

## BATTLE OF BALLOTS

Results of the Elections in Various States.

### APATHY IS A FEATURE

Contest Hottest in Ohio, Iowa and New York City.

Van Wyck Given 84,000 Plurality in New York City—Bashnell and His State Ticket Associates Claim Victory—Senator Hanna in a Close Fight—Shaw, in Iowa, Is Given About 25,000 Plurality—Democrats Have Maryland, Virginia, Kentucky, Nebraska—Colorado for Silver.

The elections held in the year immediately following a presidential contest are almost invariably marked by a lack of interest and apathy on the part of the electors. There is a falling off in the vote of both parties, and while the Democrats show relative gains when compared with the phenomenal presidential vote of last year, the stay-at-home vote is made of nearly an equal percentage of both parties.

Though the elections were for the most part for offices of little national importance, the result was awaited with considerable interest. In Ohio, Virginia, Iowa, Pennsylvania, Kentucky, New York, Nebraska and Massachusetts the fight was fiercest. Ohio and Iowa elected Governors. In Maryland and Ohio, a special national interest was involved on account of a United States Senator having



ROBERT A. VAN WYCK,  
Chosen Mayor of Greater New York.

ing to be elected from each of those States. Great interest attached in Ohio, Maryland and New York. In Ohio, the Democrats endorsed the Chicago platform, and the silver forces contended for the establishment of their doctrine and the election of a Senator. The Republicans made a fight for the present gold standard, for Republican principles and for the election of Mark Hanna to the Senate. In Maryland the important fight was over the senatorship. In New York, where interest centered almost solely in the Greater New York mayoralty fight, the situation was badly mixed. The Democrats were divided into silver and gold factions, Tammanyites and anti-Tammanyites. The Republicans and to contend with a division of their forces on account of the independent nomination of the Citizens' Union in New York City, and with a small fragment of the anti-Platt Republicans. Then the dramatic death and the funeral of Henry George, the nominee of the Democracy of Thomas Jefferson and author of "Progress and Poverty," on the 3rd of November, an unprecedented event in the political history of the country, if not of the world, and the selection of his son Henry George as his political heir, brought about complications which had never before been encountered in a municipal campaign. In Iowa, very important local questions entered into the fight. The Democrats, in addition to making a fight on the other Bryan lines, attacked the record of the Republican State officers, accusing them of extravagance, etc., and a hard fight was made by both parties. In Nebraska, the Democrats, Populists and silver Republicans were united. In Kentucky the struggle between Blackburn and the Carlisle-Lindsay gold Democrats. In Pennsylvania there was a fight between the Quay and the anti-Quay elements in the Republican ranks. In Virginia the Republicans had a regular ticket, and Democrats will elect a Governor. In Colorado there was a great mix-up among the silver forces.

**New York.**  
The State of New York has reversed a plurality of 268,469 for McKinley to a Democratic majority of 84,000 for A. B. Parker as chief judge of the court of appeals. The Republicans may also have lost the Assembly, in which last year they had seventy majority. New York City has elected Robert A. Van Wyck, the Tammany candidate, as Mayor, by a plurality of 82,000. Seth Low, the Citizens' Union nominee, finished second in the race, while General Benjamin F. Tracy, Republican, and Henry George, Jeffersonian Democrat, follow in the order named.

In the State the Republican landholders of the past two years have been reversed by the changing of something like 240,000 votes. Gov. Black's plurality last year was over 200,000. John Palmer, the Republican Secretary of State, won the year previous by over 100,000. The indications are that these enormous pluralities have been swept away, and a reverse plurality of between 30,000 and 50,000 is given. The greatest surprise of the returns are the great gains made in the Assembly by the Democrats, many of them being in counties and districts where there was no expectation on the part of the Democratic managers of winning. Republicans explain these gains by attributing them to the heated municipal campaigns and the trading of votes. Early returns indicated that the Republicans will still control the Assembly by a largely decreased majority. More surprising, perhaps, than the returns on the State and Assembly district tickets were results of the municipal campaigns in the large cities. New York,

Buffalo, Rochester, Binghamton, Syracuse, Utica, Albany, Troy and Schenectady elected Democratic Mayors. In Albany the conditions were very similar to those in New York. Two Republican candidates split up the vote of that party and allowed the Democrats to win. The combined Republican vote was 2,000 in excess of the Democratic vote.

In New York City, such a rush to the polls has never been known except in presidential years. The registration was abnormal. The total of 367,256 was only



ASA S. BUSHNELL,  
Republican Claimant of the Ohio Governorial Office.

11,452 behind that of 1896. Last year only 6,000 per cent failed to vote for President, and the estimated total vote this year of 528,400 shows that the falling off does not much exceed that of 1896. The vote for Tracy, the Republican majority candidate, was divided by the candidacy of Seth Low upon a Citizens' Union ticket. Low was second and Tracy third in the contest. The George vote was inconceivable. The death of his leader evidently dissipated his following and thousands evidently voted for Tammany candidates. It is claimed that young George lost many votes through the failure of inspectors to affix his poster to majority tickets. The unofficial vote for Mayor follows: Van Wyck, 235,800; Low, 148,873; Tracy, 101,838; George, 20,890; Gleason, 321. The vote for Van Wyck is about 44.25 per cent of the total vote cast, or less than the 45.21 per cent cast for Bryan in 1896 in the same territory. The united vote for Low and Tracy shows 141,27 more than Van Wyck received. The metropolitan district is normally Democratic and the plurality for Van Wyck is a return to normal conditions in an election not influenced by national issues.

**Ohio.**  
In Ohio the official count will be necessary to satisfy the contestants. At the time this is written the more the respective parties figure on their returns the smaller their pluralities seem to become, while their claims increase in opposite direction. The closeness of the vote has caused intense feeling and the usual cry of fraud. When the result was in doubt in 1885 it was discovered that the tally sheets were forged. Tuesday night the Republicans telegraphed to all their county committees to beware of the frauds of 1885. And when the Republicans were claiming the Legislature by only one or two majority on joint ballot, the Democrats telegraphed their county committees to beware of all sorts of fraud and to remember that it was a majority of one by which the great crime of 1877 was committed that defeated Tilden. The State headquarters will be kept open until the official counts are made in all of the 88 counties of the State.

Meantime, the managers at both the Democratic and the Republican State headquarters claim the State. The Democrats claim the election of Chapman for Governor, and their State ticket on such a close margin that it will require the official figures to determine the result. Chairman McConville claims that the Democrats will have a majority of seven in the Legislature on joint ballot for Senator. He says the Republicans are claiming counties that are doubtful and others that the Democrats have carried by small pluralities. The Republicans claim that Chapman and George (Governor and Senator) and the Republican State ticket has been elected by a good 8,000 plurality, and that the Republicans will have a majority of two on the joint ballot of the Legislature for Senator. The Republicans concede that they will not have a majority in the State Senate. The Democrats claim one of the 33 Senators, with 18 conceded to the Democrats and one doubtful. They claim that



LESLIE M. SHAW,  
Republican Governor-Elect of Iowa.

57 members of the House are theirs, conceding 48 to the Democrats, with four doubtful.

**Iowa.**  
Iowa elects L. M. Shaw and the Republican State ticket by about 25,000 plurality. The Republican State committee claims 30,000 or more. The Legislature is overwhelmingly Republican. It is figured that the Republican vote in the State fell off 25 per cent, while the fusion vote is only reduced about 10 per cent. The fusionists admit their defeat by an adverse plurality of 15,000. McKinley's plurality last year was 65,552, but it included the votes of many thousands sound money Democrats, who scattered this year. Chairman McMillen, Republican, contends that Shaw's plurality will reach more than 20,000. Chairman McMillen's estimate of vote is: Republican, 230,000; Democratic, 200,000; Prohibition, 7,000; gold Democrat, 5,000; Populist, 3,000. The Democratic State committee concedes Shaw's election by 15,000, but claims gains in Legislature. Democrats concede 39 Republicans in the Senate, counting newly elected members and

hold-overs. Democrats claim 38 members of the House. Republicans concede them 37. Republicans claim 63 in the House out of 100, and 40 out of 50 in the Senate.

**South Dakota.**  
South Dakota polled a light vote. Democrats joined with the Republicans against the Populists. Of the eight Circuit judges, the Republicans elect five. In the second district a Populist majority of 1,000 was overturned. Republicans winning by 500. Later returns may add to Republican victories.

**Nebraska.**  
Nebraska has gone Democratic. At midnight the fusion State chairman claimed the State by from 20,000 to 25,000 plurality. The Lincoln State Journal (Rep.) at that hour conceded the defeat of the Republican State ticket. The chairman of the Republican State committee made no statement.

**Massachusetts.**  
Massachusetts re-elects Walcott, Republican, Governor by 168,000 votes, against 90,000 for Williams, Democrat, and 17,500 for Everett, gold Democrat. The lower house of the Legislature will stand 200 Republicans to 40 Democrats, while the Senate will stand 33 Republicans to 7 Democrats.

**Maryland.**  
Maryland returns up to midnight Tuesday leave it a matter of doubt whether the Legislature which will choose a successor to Senator Gorman will be Democratic or Republican. Both parties claim it. Gorman's friends claim that it is reasonably certain he will be returned.

**Colorado.**  
Colorado has probably been carried by the silver men, although the result is in doubt, owing to the delay in getting returns from outlying districts. Violent storms kept many voters indoors. Women, unable to go to the polls, were, however, enabled to get to the polls.

**Kentucky.**  
Kentucky has gone Democratic. The returns up to a late hour indicate that Sam J. Shackelford, the silver Democratic candidate for clerk of the Court of Appeals, has from 5,000 to 7,000 plurality. Louisville has elected a Democratic Mayor by at least 4,000.

**Virginia.**  
Virginia has elected the Democratic State ticket, headed by J. Hoge Tyler for Governor, by a majority exceeding 50,000. Returns indicate that not a Republican or Populist has been elected to the Legislature. There was a very small vote.

**Pennsylvania.**  
Pennsylvania held its quietest election in many years. The feature was the ex-



HORACE S. CHAPMAN,  
Ohio Democratic Candidate for Governor.

tensive scratching of the name of James S. Beason, candidate for State treasurer. Returns indicate a substantial Republican majority.

### POSTAL BANKS NEEDED.

Indiana Financier Tells Why They Would Be Popular with the People.  
At a recent meeting of the Indiana Bankers' Association at Indianapolis, Mortimer Levering of Lafayette, recognized as one of the best financiers in Indiana, made an address on postal savings banks in which he said: "The government is in a position to manage this thing through its present postoffice system, and will scarcely increase the expenses of that department, while it will enhance the accumulated wealth of the people throughout the whole United States. It was thought that building and loan associations would care for the savings of the masses, but people have become suspicious of them. It is well known that lawyers in Indiana are making as much as \$10,000 a year out of these institutions, and officers are making much money out of them. We all know that trust companies are not organized as eleemosynary institutions. We want a system of savings banks that are for the poor people. What greater privilege could a man have than to think himself a depositor of the United States?"

### Telegraphic Brevities.

Gaston Bethune, the well-known French artist, is dead.

Carl Gerber, a 4-year-old boy of New York, is dead as a result of eating jimson weed.

A young lady in Emporia, Kan., recently stabbed a young man with a hat pin. He was quite "stuck up" by the occurrence.

Lady Rachel Charlotte Wyndham-Quin, oldest daughter of the Earl of Dunraven, was married in Limerick to Fitzgerald, the Knight of Glynn.

The case of ex-Treasurer Bartley, under a twenty-year sentence for stealing \$500,000 from the Nebraska State treasury, will be heard in the Supreme Court Thursday.

The jury in the Kansas City case of Dr. Jefferson D. Goddard, for killing Frederick J. Jackson, with whose wife it was alleged Goddard had been extremely friendly, reported for the fifth time that they were unable to agree upon a verdict and were discharged.

Chief Moore of the United States weather bureau, in his annual report to Secretary Wilson, calls for an appropriation of \$1,044,050 for the next fiscal year, and says this will admit of the establishment and equipment of new stations in important centers of population.

A statement prepared by the bureau of statistics at Washington shows that the number of immigrants arrived in the United States during the first three months of the present fiscal year was 40,206, which is a decrease of nearly 11,500, as compared with the same period last year.

### SECRETARY WILSON'S WORK.

**A Year's Operations of the Agricultural Department.**  
Secretary Wilson has presented his report to the President reviewing the operations of the Department of Agriculture for the past year. The most important recommendation made by him is one that agents for the department should be stationed at each of our more important American embassies for the collection of information of interest to American farmers. Referring to this subject, he says: "We are endeavoring to get information from foreign countries with which we compete in the markets of the world, regarding crops and prices. We are also taking steps to ascertain what crops are grown on different thermal lines so that seeds and plants may intelligently be brought to this country to assist in the diversification of our crops and add to their variety. There is necessity for American agents in every foreign country in which we send representatives, who have had education in the sciences relating to agriculture. The agricultural colleges endowed by Congress are educating along these lines."

The Secretary refers to the efforts of the department to extend the foreign markets for our dairy and live stock products, which he thinks can be done by making the foreigners familiar with them. Instead of sending abroad for seeds he says the policy in the future will be "to encourage the introduction of such seeds as will enable our people to diversify their crops and keep money at home that is now sent abroad to buy what the United States should produce."

Mr. Wilson says the department will continue its pioneer work in the encouragement of the sugar beet and expresses the opinion that the country will within a few years raise all the sugar it requires. He expresses the opinion that nearly all of the \$382,000 sent abroad last year for sugar, hides, fruits, wax, animals, rice, hay, hemp, cheese, wheat, barley, beans, peas and silk might have been kept at home. He also thinks the United States should grow their own clover, castor beans, lavender, licorice, mustard, opium, etc.

With reference to horses the Secretary says: "The American farmer can grow horses as cheaply as he can grow cattle. We have a heavy and profitable export trade in cattle and may have an export trade equally heavy and profitable in horses. The department is gathering facts regarding our horse industry at home and the requirements of purchasers abroad so that our farmers can keep what foreign buyers demand."

The most important work in which the animal industry has been engaged is, he says, that looking to the destruction of the cattle tick, for which, it is believed, that an agent has been found in a petroleum product known as paraffin oil, in which infected cattle are dipped.

The extension of the meat inspection to abattoirs engaged in interstate business is recommended as the continuance of the inspection of export animals in order to maintain the market which has been secured for them in other countries.

The Secretary criticizes the present system of crop reporting. He says it is extremely cumbersome. He recommends the employment of a principal statistical agent in each State.

### CHICAGO HORSE SHOW.

**Society Turns Out in Force on the Opening Night.**  
Ten thousand enthusiasts, Chicagoans gave enthusiastic support to their first horse show in the beautifully decorated and brilliantly illuminated Coliseum. Society on the opening night filled the boxes and graced the spacious promenade which encircled the ring. It was full as soon



THE CENTRE OF TO-DAY.

after the opening before the places of honor were filled by many Chicago notables. The best of the handiwork, the finest of the most aristocratic members of the family of horses were entered to receive their honors during the week. The Coliseum had been decorated elaborately, music added to the attractions of the show, and nearly \$100,000 worth of prizes were given to successful competitors.



The Comic Side of The News.

After all, the ideal foot-ball colors are black and blue.

The health department of Baltimore wants kissing abolished "on the ground that it is a public menace." Why public?

The country bears less of General Miles since he came home than when he was abroad. He was more popular when he was Miles away.

A St. Louis newspaper contains an advertisement reading as follows: "Wanted: A woman to cook." Is this a result of the Lucretia trial?

Kansas women are setting the fashion of removing the hat upon entering church. It is an old custom to avoid the hat at church services.

And now it appears that some designing rascal has been swindling the Indiana farmers by charging exorbitant prices for kernels from an ear of corn of mammoth size, which has been manufactured by neatly joining together several sections of different cobs. As the swindle already has been perpetrated and the swindler is at large and unknown, nothing remains to be done by the victims except to acknowledge the con.

### GORMAN IS BEATEN.

**Republicans Control the Legislature in Maryland.**

According to Associated Press dispatches, an official count of the ballots cast in Maryland leaves no further room for doubt that the Republicans have control of both branches of the Legislature and that a Republican will succeed Asa P. Gorman in the United States Senate. The Republicans have forty-nine members in the House and the Democrats forty-two. The Republicans also have eighteen Senators to elect, and a majority on joint ballot of seventeen. Among those most prominently mentioned as the probable successor to Senator Gorman are Alexander Shaw, former Governor, and L. Findlay, Postmaster General Gary and Congressman Sidney B. Mudd.

The result will make no immediate change in Senator Gorman's plans, as his term does not expire until March 4, 1899. Mr. Gorman will not be troubled by the howling of the traditional wolf of poverty at his door. He probably could draw his check for \$3,000,000 without an indignation. His money was made largely through lucky investments in some coal and iron lands in western Maryland. Mr. Gorman will be missed in the Senate. In one way and another he has been associated with this body at various times since 1852, when he entered it as a page. In January, 1880, he was elected to the United States Senate to succeed William Pinckney White. He took his seat March 4, 1881, and was re-elected in 1886 and in 1892.

### COURTS WILL DECIDE.

**Ohio Election Will Result in Numerous Contests.**

The contest for the control of the Ohio Legislature will likely be carried into the courts. To the official returns of close counties protests have been made. It is expected that the issue of certificates of election to certain legislative candidates if the courts will so order. Press dispatches say that if Wood County should finally be put in the Democratic list by the official figures the Legislature would stand 74 Republicans to 71 Democrats. While this is a mathematical majority of 3, it is a constitutional majority of 2.



MARK HANNA.

of only 1 to guarantee the re-election of Senator Hanna.

It requires seventy-three votes or a majority of all the 145 members to elect a Senator on joint ballot. With only seventy-four votes in the Legislature the death of a Republican member or a Republican vacancy from any cause would leave the bare majority and if Wood County should elect a Democratic representative there would no doubt be startling developments at once in at least two other counties.

It is estimated that there were 900,000 votes cast, of which the deciding seventy votes is an infinitesimal per cent. The Republican plurality on the State ticket approaches 20,000.

### CUBANS WILL NOT SURRENDER.

**Officers in Pinar del Rio Province Issue a Proclamation.**

The following official document has been issued by the Cubans from Pinar del Rio province to the world:

"We will never forget the bloody defenses of the sanguinary Weyler, representing the Spanish nation, his assassinations of aged people, women and children, the persecution of our families by the brutal Spanish soldiery and the efforts of the chiefs to exterminate all the elements that compose Cuban society. All these have aggravated our convictions and we declare again that we will not accept anything but absolute independence."

There was a great manifestation in Key West, Fla., by over 10,000 people, mostly Cubans, against the acceptance of autonomy from Spain. It concluded with a grand torchlight procession and addresses by prominent Cubans at San Carlos opera house. Strong resolutions were adopted against accepting autonomy. Among the transparencies in the procession were "Independence or Death" and "Down with Autonomy."

### News of Minor Note.

Anna Rly the Hallows, who killed herself at Beverly, Cal., was a morphine user.

Justus Miller, the well-known collar manufacturer of Troy, N. Y., and prominent member of the prohibition party, died of hiccoughs.

Robert Lucas, a crack bicycle rider living at Wallace, Mo., while out for a spin, was thrown from his wheel and received injuries which proved fatal.

The failure of J. D. McKee was announced on the New York Consolidated Stock and Petroleum Exchange. The failure is said to be a small one. Assets and liabilities unknown.

The Congregational College of Perry, O. T., was burned. The building and fixtures are worth \$12,000 to \$15,000, with about \$5,000 insurance. It is certain that persons set fire to the building.

William J. Lehigh, manager of the Merchants' Exchange Association at Portland, Ore., committed suicide on the floor of the exchange by shooting. Business reverses caused him to take his life.

### GREAT ROAD IS SOLD

**UNION PACIFIC DISPOSED OF AT AUCTION.**

The Reorganization Committee at Omaha, Neb., Makes the Only Bid for the Property—Full Amount Received Is \$57,564,932.70.

**Bonds Brought About One-Third.**  
The Union Pacific Railroad was sold in Omaha at auction Monday. The sale was forced by the United States, holder of a second mortgage. In order to protect stock and bondholders, the reorganization committee bid in the property, real and personal—that is to say, track, rolling stock and bonds. For the railroad property the committee paid \$38,888,281.87; for the bonds, \$18,676,650.93. There were no other bids. The price obtained is sufficient to pay the government in full. Mastery in Chancery, W. H. Connelley, St. Paul, conducted the sale, and it is said his fee will be the largest ever given an auctioneer, as the Union Pacific is the most valuable property ever sold at auction.

The idea of uniting the Atlantic and Pacific coasts by a system of railways took shape in a bill that passed the United States Senate June 20, 1862, by a vote of 25 to 5. This was the actual starting of the Union Pacific. The House passed the bill by a vote of 104 to 21, and four days later President Lincoln made it a law by affixing his signature.

A charter for \$100,000,000 was given the corporation and a land grant of 20,000,000 acres attached. The company was formally chartered July 2, 1862, with authority to construct a railway from Omaha to the eastern boundary of the State of California. The act incorporating the company provided for a government subsidy equal to \$16,000 per mile for that portion of the line between the Missouri River and the base of the Rocky mountains; \$48,000 per mile for a distance of 150 miles through the mountain range; \$32,000 per mile for the distance intermediate between the Rocky and Sierra Nevada.

The company had also a land grant totaling 12,800 acres to the mile. "The original act provided that the government subsidy should be a first mortgage on the road, but by amendment it was made a second mortgage; the company being authorized to issue its own bonds to an amount equal to the government subsidy per mile on the line. The whole available capital of the road that was ultimately to cost \$50,000,000 was only \$218,000."

The matter was investigated by Congress and the expulsion of Ames from the House of Representatives, of which he was then a member, was recommended. It was, however, never carried out. The first eleven miles of the road were completed Sept. 25, 1865, and the road was completed to its junction with the Central Pacific at Promontory Point, Utah, May 10, 1869.

The meeting of the two roads was duly celebrated. Gov. Leland Stanford of California, president of the Central Pacific, was present, as was Vice President Duffalo for the rails and when they met the last spike, which was of gold, was driven. Telegraph wires were connected, so that each blow of the silver sledge was reported instantly in all the large cities from the Atlantic to the Pacific.

### BANDIT GANG ESCAPES.

**Break Down the Prison Bars at Deadwood, S. D.**

The notorious Curry gang of bandits broke jail at Deadwood, S. D., Sunday night, and after exchanging several dozen shots with citizens who intercepted them accidentally made their escape to the mountains. The daring of the escape was consonant with the boldness of the men who accomplished it. The fugitives are "Tom" O'Day, Frank Jones, "Tom" Jones and Walter Frank Jones. They were confined in their strong cells by sheer strength of arm, assaulted the jailer with their fists and reached the open air.

The jailer was well armed, but the ferocity and daring of the men was too much for him. The first he knew that trouble was coming was when the side of the big steel cage in which the bandits were confined gave way beneath their united strength. With a roar the men carried the wooden partition before them and burst into the view of the astonished guard. He drew a revolver, but was knocked down. When he revived an hour later he was covered with wounds, but was able to tell the story.

As the jail was a regular armory the men had no trouble selecting a supply of the finest weapons. Each got a rifle, four revolvers and a quantity of ammunition. They rushed boldly from the place, and started on a run across the level toward the hills. They ran over "Pete" Bella, a special mine watchman, a block away. He was knocked down, but arose, drew a revolver, and, taking in the situation, began shooting. In an instant a wild scene was being enacted. Citizens gathered from all directions, and the outlaws retreated into the dense forests of the mountains, turning and firing as the pursuers gained on them. Streams of fire followed them from a score of revolvers in the hands of many citizens.

That many deaths did not result is due wholly to chance and darkness. Fred Swobbe was desperately wounded. Frank Elliott was shot through the body and several citizens were injured more or less.

The knell of the modern game of football in Georgia has been sounded. Following the tragic death of 18-year-old Richard Gammon from injuries sustained in a game at Atlanta, a storm of public sentiment has swept over the entire State, demanding the immediate and absolute abolition of the brutal sport.

The Baltimore Herald has passed into the hands of Wesley M. Orr, who for several years has had a large interest in the company and who has acted as its president and general manager since the death of A. Beckhoff several months ago.

### SOCIETY MEETINGS.

**M. E. CHURCH.**—Rev. R. L. Cope, Pastor. Services at 10:30 o'clock a.m. and 7:30 p.m. Sunday school at 12 m. Prayer meeting every Thursday evening at 7:30 o'clock. All are cordially invited to attend.

**PRESBYTERIAN CHURCH.**—Rev. G. W. Potter, Pastor. Services every Sunday morning and evening at the usual hour. Sunday school following morning service. Prayer meeting every Wednesday evening.

**DANISH EV. LUTHERAN CHURCH.**—Rev. A. P. W. Bekker, Pastor. Services every Sunday at 10:30 a.m. and 7 p.m. and every Wednesday at 7 p.m. A lecture in school room 12 m.

**METHODIST PROTESTANT CHURCH.**—Rev. W. H. Mayhew, Pastor. Services every Sunday at 7:30 a.m. and alternate Sundays at 10:30 a.m. Sunday school at 2 p.m.

**ST. MARY'S CATHOLIC CHURCH.**—Father H. Vachet, Pastor. Regular services the last Sunday in each month.

**GRAYLING LODGE, No. 356, F. & A. M.** Meets in regular communication



















## GREAT YERKES GLASS

ENORMOUS TELESCOPE WHICH HAS BEEN COMPLETED.

New Observatory at Lake Geneva, Wis. Object Glasses and Their Manufacture—The Delicate Operations Involved in Grinding a Large Glass.

Some Big Telescopes. The opening of the Yerkes Observatory was one of the most notable events in the history of modern astronomy, for the telescope then put in operation is the most powerful instrument that has ever been turned to the heavens. The distinguished American astronomer, Dr. William C. C. Peters, gathered at the observatory had an opportunity such as was never offered to astronomers before, for the enormous power of the 40-inch object glass brought into view details on the moon and planets to a degree never equalled by any glass previously constructed.

The Yerkes Observatory, so called by its founder, is probably the most perfectly equipped observing station in the world, whether considered with regard to its situation, to the number of its instruments or their delicacy. The situation is chosen with reference to obtaining not only clear sky, free from dust and smoke and electric light, but also a spot free from vibrations of the earth. The instruments of an observatory are so delicate that the jarring of the earth caused by a passing wagon or train may put them out of equipoise and require a readjustment. The observatory is located in a Chicago institution, but is, as a matter of fact, located in Wisconsin, at the head of Lake Geneva, seventy-five miles from Chicago. A large area of ground was purchased and laid off in such a way that there should be no roads in the immediate vicinity of the building. The nearest railroad track is almost two miles distant, while the closest electric lights are seven miles. The instruments can easily be protected from electrical disturbances, but the shining of an electric light in the sky is a source of serious embarrassment to the observing astronomer, for a bright illumination close at hand utilizes the power of his instrument when observing the stars. Thus it will be seen no pains have been spared to perfect all the conditions favorable to the astronomer and the great fortune which has been expended in fitting out the observatory has made it perhaps the most perfect of the planet.

The main building is 350 feet in length, or more than one city block, while the two Ls are each 100 feet. The dome, in which the great telescope is located, is at the further extremity of the main building, while at the ends of the Ls are smaller domes for telescopes of less power and other instruments. The building in which

the astronomers at William's Bay will not be slow to gratify.

The Yerkes telescope has an object glass of 40 inches and a focal distance of over 60 feet, the glass being, as already stated, the largest ever made. The Clark has a similar glass in hand, which, when completed, will be placed in an observatory, under the direction of Harvard, on Mount Wilson, in Southern California. America will thus have the proud distinction of possessing the two largest telescopes in the world. Even without these, however, our country is to borrow a slang phrase, "in the swim" astronomically, as well as every other way, for we possess a larger number of great telescopes than any other nation in the world. The Lick Observatory, situated at Hamilton, Cal., has a 36-inch glass, set up in 1887, the equatorial, in the Naval Observatory at Washington, has a glass of 20 inches, put in position in 1873; McCormick's glass at the University of Virginia is 20 inches, set



CHARLES T. YERKES.

up in 1883; the observatory at Princeton has a 23-inch glass, put in position in 1883; the telescope of the University of Chicago, set up in 1894, which did service before the Yerkes instrument, had an aperture of 18.5 inches; in 1880 a telescope of 10 inches was hung in the Warner Observatory in Rochester, N. Y.; in 1870 a telescope of 15.5 inches was placed in position at Madison, Wis., in the Washburn Observatory; as early as 1843 a telescope, with a glass slightly less than 15 inches in diameter, was put in operation at Cambridge, Mass., by Harvard University; in 1806 the Litchfield Observatory at Hamilton College at Clinton, N. Y., was provided with a 13.5-inch glass, and about the same time Columbia College,

world are Lord Rosse's, at Parsonstown, Ireland, with a 72-inch reflector; the Bessemer, London, 60; Sir William Herschel, 48; Russell, Liverpool and Melbourne, 48; Paris, 47-inch; Comenag, Berlin, 37; Toulouse, 33-inch; Marseille, 31.5; and Harvard College, 29-inch. The enormous weight of the mirrors of the reflecting telescope is a serious objection to their use. The two reflectors in Lord Rosse's telescope weigh the one seven and the other four tons, and the difficulty of casting in a homogeneous mass such a quantity of metal is as great an obstacle to its employment in a telescope as the cost. There has recently been discovered, however, a method of covering plate-glass with silver so as to give a perfect reflection, and if this proves successful reflecting mirrors may yet play an important part in the history of practical astronomy.

The principal makers of object glasses are the Clark of Cambridge, Mass.; Merz, Grubb, Cauchoix and Fitz, in Europe. The Clark have an established reputation superior to that of any other manufacturers, and, from the excellence of their work and the success with which they have manufactured these huge object glasses, deserve the fame that has come to them. Nearly all the great glasses in this country are the work of the Clark factory, and although the glass is procured in Paris, the labor to bring it into proper shape has all been done in America.

Few people have an idea of the amount of labor and expense involved in the manufacture of a 36 or 40-inch object glass for a telescope. In the first place, the selection of a proper disk is a matter of no little time and labor. The glass for a telescope must be of perfectly homogeneous texture throughout. Every one has noticed in looking through the glass of a window that here and there will appear distortions of objects without, the cause being inequalities in the glass or differences in its substance. In an ordinary window glass, a distortion of this kind is a matter of no consequence, but in the object glass of a telescope, if the material at one point is a trifle denser than at another, or, if in cooling, the glass becomes harder or softer at different places, the result will be fatal to a correct observation. It is said that nearly forty disks were tested before a selection was finally made of one to be used for the Yerkes telescope. The testing of the disks is a matter of mathematical accuracy, the glass to be used being placed in a room darkened, save for a small light at the other end, then careful instruments are employed to test every quarter inch of the entire surface. Sometimes there is a superficial flaw, which disappears in the grinding, but if the defect is in the interior of the disk, that piece of glass is worthless for astronomical purposes, and is set aside at once.

After the selection of a perfect disk the grinding begins. In the early stages machinery may be employed to reduce the disk to an approximately correct form, but

measurements and the most delicate mathematical instruments are daily called into play to determine the progress that has been made. In six to nine months the progress becomes perceptible, in eight months the work is far advanced, at the end of twenty-four months of steady rubbing, the glass is approaching completion. Here and there, however, in spite of the care with which the rubbing has been done, there are inequalities detected by the instruments, it is by the eye, and these are remedied by a little extra rubbing here, a little less there. Finally, as a concluding operation, the workman spends weeks rubbing the surface of the glass with his bare hand; no reducing substance, no emery, not even the finest and softest powder, will answer the purpose; the bare hand alone must complete the operation. When the hand of one workman is bereft of the skin, another takes his place, and the bare-hand rubbing goes on for weeks and months. Finally the instruments detect no further inequalities, the tired hands of the workmen rest and regroup the cables that have been lost in the process.

At the workshop it is mounted in a temporary tube, then taken down, and, if necessary, retouched at different points and packed for shipment. Seventy-thousand-dollar object glasses for telescopes do not travel in freight cars; the jolting would ruin them. They are packed with dense layers of cotton batting, in boxes especially made for the purpose, are transported in self-sprung vehicles, at a walk, to the nearest railroad station, and then ride in a palace car to their destination. The box is set on edge, and at every few miles is turned so as to prevent the motion of the glass to the jarring motion of the train, lest, on account of the great weight, the substance of the glass should be changed in texture by the internal strain. A force of skilled mechanics accompany the glass to its destination; no one is allowed to touch it but they, and then only with the greatest care. The work of adjusting it in the telescope and then of mounting the instrument. Ere it starts on its journey it is insured for its full value against accident, and the Kohinoor in the Tower of London is not watched more closely than the object glass of a telescope.

### LOST MINE IN ARIZONA.

Rich Property, Guarded by Crumbling Breastworks.

The story of the discovery of an old, forgotten mine in an unfrequented locality in the foothills of the Pinall mountains, embellished with romantic details such as usually accompany legends of lost mines, created a lively interest about the public resorts in Globe.

L. S. Goble, R. Quarrels and H. S. McClelland, on August 17, while prospecting in the foothills eight or nine miles south of Globe and three and a half miles to the left of the toll road, discovered an old shaft, and near by on the hill above the ruins of breastworks, which had evidently been erected for defense against Indians. The evidence of great age observable in the decayed shaft, almost filled with debris, and the crumbling breastworks, excited the party's curiosity, and they stopped to investigate. The old shaft was found to have been sunk on a well-defined ledge, from which they took promising specimens of ore which tested well in copper and gold.

Owing to the unsafe condition of the old shaft, after having removed two or three feet of the debris, they abandoned it, and having made their locations, they started a new incline shaft below the old works. From the surface down they had a twelve to fourteen inch streak of sulphur ore running from 15 to 50 per cent. in copper and well in gold, one assay giving \$42 per ton. The incline is now down fifteen feet and the ore has widened to three feet.

A well-preserved skeleton, with a bullet hole through the skull, or bearing other evidence of foul play, is a desirable, if not an essential exhibit of every such discovery, and as this was lacking, Mr. Goble industriously set about to supply the deficiency, although in justice to our informant, he says it was the hope of uncovering treasure more than to make so gruesome a find, which prompted him to explore a mound of stones lodged in a crevice in the rocks near the breastworks. After removing about three feet of rock and leaves Goble struck his pick into what proved to be the eye-socket of a human skull, which caused him to momentarily shrink with horror, but summoning up courage he proceeded with the work, and soon uncovered a complete skeleton of a man. Near the right hand lay a dagger eaten with rust, a large chunk of quartz seamed with coarse gold, and a handsome specimen of onyx. What was the fate of the human being whose bones had been thus rudely disturbed? Had he been murdered by the implacable foe of the "white man," the blood-thirsty Apache, or had he peacefully laid down his life's burden and been tenderly committed to the grave by friendly hands? There is no answer, and the mystery must remain unsolved. Globe, A. T., Silver Belt.

### Osman Digma a Scot.

Osman Digma, who for years has been giving the British trouble on the Upper Nile, is, according to the Pall Mall Gazette, really a Scotchman named George Nesbet. He was born in Rouen of a Glasgow father, who in 1818 emigrated to Egypt, where he died. His widow married a Turk named Osman, who adopted her son and made him heir to his slave business. George Nesbet took the name of Osman Ali, and after being educated at the military academy, where he was the intimate friend of the late Arabi Pasha, became a slave trader. The harm done to his business by the English and French interference in Egypt, and the fall of Arabi Pasha, turned him against his former countrymen. He must be over 60 years of age now.

### Cyclopean Building.

The best examples of cyclopean building are at Baalbec. There are stones in the Baalbec walls thirty feet above the level several of which are sixty feet long, twenty-four feet thick, and sixteen broad, each stone weighing over 2,500 tons, all cut, dressed, and brought from distant quarries.

### Ants' Poison Bag.

Ants are provided with a poison bag which discharges a fluid having a strong sulphurous smell, sufficient to drive away most enemies.

## WASHING THE STREETS.

One German Town with Two Separate Water Supplies.

Undoubtedly one of the best methods of keeping streets clean is that of frequent flushing with water, especially when the sewer outlets are so planned as to permit all the solid refuse to be washed out through them along with the water. In many cases, however, the supply of city water does not permit the liberal flow necessary for a thorough flushing, so that this luxury can be permitted only when an excess of water is on hand. The city of Oldenburg, near Lubeck, has provided an independent water supply for the especial purpose of keeping the streets washed, this being one of the numerous sanitary improvements which have resulted from the cholera epidemic of 1892 in the north seaports. In order to avoid the cost of new buildings, the pumping plant is placed in one of the electric stations where space was available, the water being taken direct from the River Hunte, the pumps being driven by belt from turbines. A system of high-service mains, altogether distinct from the regular water supply is connected with this pumping plant, and a pressure of sixty-five feet head is maintained by an automatic regulator, permitting the excess water to be returned to the river whenever the demand is reduced. This high-service pumping system supplies thirty-seven flushing hydrants placed at such points of elevation as to permit the streets to be cleared by the slope. The hydrants are so arranged that their ordinary discharge is through openings in the curb at the gutter line, but they can also be immediately converted into fire plugs for hose attachment, either for street sprinkling or for fire engine supply. Since the river water at Oldenburg is unfit for household use, the plant above described is available only for the special purposes for which it was planned, but the expense thus saving a local supply of brackish water for purposes of street washing and fire service is so moderate that the method is worthy of consideration in other localities. The entire cost of the Oldenburg plant was less than \$7,000—that is, less than \$200 per hydrant—while the economy in street cleaning alone would soon repay this, after which the cost of operation would be much less than by any other method, not to mention the superior sanitary advantages. Electrical Engineer.

## TO MARKET BY TROLLEY.

How English Truckers Save Their Horses for Farm Work.

An English trolley line, plying between Bessbrook and Newry, through a rich farming district, makes a substantial addition to its receipts by hauling farm wagons over its lines attached to the motor car, in the place of the trailer, which is sometimes seen. In order to keep the wagons on the track a second pair of rails is laid inside the working tracks and slightly higher. The towns at either end of the line are both market towns, and the line runs directly to the business centers, where the wagons are drawn aside and run into their places by a half-dozen sturdy men, who are paid a few pence each by the countryman for this service. It is, therefore, possible for a farmer to bring his produce to market and dispose of it without the aid of his horses. It is not an uncommon sight to see a lumbering farm wagon loaded with hay or produce drying along behind the motor car on its way to market. The farmers take kindly to this scheme, as it is a saving of money as well as horseflesh.

## A Christian Endeavor.

It was the work of Dr. F. E. Clark, and was successful, as the reader will see. The doctor was in a railway car in India, and in another compartment were several private soldiers. The story is told by Doctor Clark in the Golden Rule.

The soldiers were beguiling the tedium of the way by coaxing to their compartment every poor, hungry dog which they could induce to come near them with a chicken bone or a piece of bread. Then, when the dog got within striking distance, with a heavy hockey stick they would hit him with all their might over the back or legs. I saw them break the back of one poor dog, and the leg of another that went off crying with a most pitiable "ki-ki-ki."

I now thought it was time to interfere, and as few people travel in this part of India except government officials and military officers, I knew that "Tommy Atkins" would take me for one of his superior officers. So putting my hand into the compartment where the four human brutes were seated, I said to them:

"You are the most cruel and cowardly men I've ever seen in my life, to beat the poor dogs in this way. If I know of your doing anything more of this sort on this journey, I will report you to the general in command at Agra."

It is needless to say that these particular "Tommys" were cowardly as well as brutal. They said not a word, but slunk into a corner of the compartment, and I heard no more yelping dogs that day.

## Birds' Eggs.

Next to that of the British museum the largest collection of birds' eggs is that belonging to a lawyer named Nehr Korn, in Braunschweig, Germany. He intends soon to issue a catalogue of his collection, with fifty colored plates depicting the more valuable specimens, of many of which no other sample is known to exist.

## Fashionable Ink in Paris.

The fashionable ink in Paris is violet color. Some men use a golden ink. It is a favorite plan to use several kinds of varied hues in writing one letter. This is thought to add to the appearance of the note.

## It's all well enough for a man and wife to pull together, but they should draw the line at hair-pulling.

## PAGE WAS TOO FAST.

Edward Langtry Drank Himself Into a State of Insanity and Died.

No one familiar with his history was surprised to learn that Edward Langtry, ex-husband of the Jersey Lily, had died in a Chester, "crazy" mad-house. The troubles between him and Mrs. Langtry and which indirectly led to his death are of long standing. Like so many matrimonial failures the Langtrys' troubles began trivially. After the Quaker Irishman—for Mr. Langtry was the son of a Belfast (Ireland) Quaker—had married Lily, they took up their abode in a London suburb. One night Mr. Langtry met a baronet, just the way young husbands are always doing in novels. His name was Sir George—Sir George Chetwynd, Baronet of Grendon Hall. It was just a casual sort of meeting, but it changed the whole course of the young Irish Quaker's life. He invited the baronet to his home, and the latter and Mrs. Langtry became mutual admirers. The baronet insisted that the Langtrys should accompany him to his country place. They went, and for weeks had an enjoyable time. On her return home Mrs. Langtry became dissatisfied with her surroundings. She wanted a city house, and one was found for her in Belgrave square.

For a woman as young, beautiful and charming as Mrs. Langtry, it was not difficult to enter the charmed Belgrave square circle, and as her dinners were delightful, her house superb and her husband agreeably blind, it was not long before she enjoyed the distinction of being the most talked-of woman in that part of the English capital. Then came the crowning glory, and, incidentally, the start of the pace that killed—Langtry. She met the Prince of Wales.

He had seen a portrait of her by Millais, had admired the color, the pose, the simplicity of charm, and bought it. Millais called it the Jersey Lily, and the prince announced that he would be graciously pleased to meet the original Jersey Lily. From that moment began Mrs. Langtry's fierce period of hobnobbing with royalty.

## EDWARD LANGTRY.



EDWARD LANGTRY.

Her royal highness, the Princess of Wales, refused to recognize her, and elderly women cut her, but that made no difference, the Prince smiled and invited her and her husband to Marlborough House.

The only cloud on the Lily's horizon then was her husband's income, or rather his lack of it. At the pace she had set it was quite impossible to make ends meet. In an evil hour she offended the Prince of Wales. Her editors, hearing of this, began pressing her. What little money her husband had was soon spent, and the fashionable house in Belgrave square had to be given up. One by one the costly gowns and ball robes went to the pawnbroking philanthropists, and when the last one had gone and starvation had become painfully and vulgarly familiar succor came.

It was through the wife of Labour, the journalist, she alone had remained loyal in her friendship, and she begged her husband to do something to relieve the Langtrys' desperate situation.

"She can't work, she can't write, what can she do?" asked "Labby."

"Put her on the stage," said his wife. "That's a capital idea," exclaimed her husband. "She can't act any more than she can write, but she is beautiful and has created a great deal of scandalous gossip; she will make a hit."

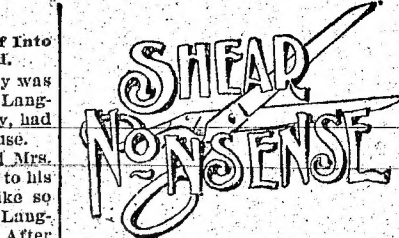
And Labour was right. Mrs. Langtry did make a hit. She could not act, but she tried desperately, pitifully, and the people went to see her, and the theater was selling standing-room from the first night and the prince publicly forgave her by coming to witness her performance. With the return of prosperity and the nobility, the actress had no more use for her husband. She discarded him then and there, and since then her only interest in him has been to get a divorce from him. After many efforts Mrs. Langtry succeeded last May in securing a divorce in California. This the husband did not recognize. While for a score of years he never met his wife he still refused to agree to a legal separation. Death has now, however, set both free.

Edward Langtry was not of a type to be emulated. He left his young and beautiful wife to her own devices when they had been married only two years. While she was whirling in the vortex of London society, he was contentedly yawning and drinking around the coast. He was as indifferent to her as she was to him. The principal thing that can be said in his favor is that he steadfastly ignored the opportunity presented to him at the outset of her career of taking a certain position in society as the husband of the Jersey Lily. For some years back Edward Langtry had displayed unmistakable signs of the life of dissipation he had led. Originally he was good-looking and gentlemanly, but lately he was bloated almost beyond recognition and the bridge of his nose had been broken by falling when under the influence of liquor.

## Cane with a History.

Major M. M. Clothier, of Whitcomb, Wash., has a hickory cane, cut at Plymouth Rock, Mass., in 1621, by Nathaniel Pierce, who came over in the Mayflower. The cane has been passed down to the eldest son or daughter for many generations, and came to Major Clothier from his grandmother, Sarah Mason, who made the 1,700-pound cheese which was given to President Jefferson.

The less work a man does the more he tires other people.



Light-houses, from a theatrical point of view, always indicate breakers ahead.

Kate—I think that Cholley has something on his mind. Polly—if he has, he must be good at balancing—Somerville Journal.

"Now that I have got my hay in," said the relieved farmer, "I think the world would be greatly better for a good shower."

Gabber—What does your son do for a living? Nabber—He's a scientific boxer. Gabber—A pugilist? Nabber—No; undertaker—Life.

First Seaside Belle—But how can you be certain that you are his first love? Second Seaside Belle—Well, he only got down here last night!—Sketch.

Sue—I know I'm cross at times, John; but, if I had my life to live over again, I should marry you just the same. He—I have my doubts about that, my dear.

Friend—Well, Ethel, how do you like married life. Ethel (enthusiastically)—It's simply delightful. We've been married a week, and have had eight quarrels, and I got the best of it every time.

John—Excuse me, I love you! said an impecunious German youth at a Hamburg ball. "Excuse me—yonder is my business manager," replied the young lady, pointing with her fan to her father.

Clara—How under the sun did Edith happen to marry Mr. Aikward? Dora—He was the bane of her life at every ball she attended, and I presume she married him to keep him from wanting to dance with her.

"I wonder," said a young lady, "why Hymen is always represented as carrying a torch?" To which an old bachelor sneeringly responded: "To indicate that he always makes it warm for people who marry."

Women somehow get over childish notions that men never outgrow. Some men celebrate the anniversary of every birthday as long as they live, while women abandon the childish custom almost as soon as they grow up.

"What did her father say when you told him that you wanted to marry his daughter, Rivers?" "Well, Banks, he didn't absolutely refuse, but he imposed a very serious condition." "What was it?" "He said he would see me hanged first."

His Fellow Feeling.—Paterfamilias—Look here, Dick, you've been a bit wild yourself in your day and I'd like some advice. What am I to do with Henry?

The young radical exceeds his allowance every month. Cousin Dick—Increase it.—Chicago Journal.

Seeker—I observe that Professor Stagg has been lecturing on "How to Become a Christian Athlete." I wonder what that means? Sorecann—That's an easy one.

One who is continually jumping from one religion to another.

Mrs. De Pink—I am amazed, sir, that you should propose to my daughter. Why, she has only just left boarding school, and you have not known her a week! Young Man—True, madam; but I have known you for some time, and everybody says your daughter takes after you.

The Londoner.—Our universal providing houses are so large that a small boy has been known to outgrow the snit he bought in the rear of the shop while walking to the street door. The Chicagoan—Huh! We have got department houses so big in Chicago that the floorwalkers all have to use bicycles.—Indianaapolis Journal.

"Madam," said a young lady to her preceptor at boarding school, "Mr. Bellfair has come to take me out to drive. May I go, madam?" "You know, miss, that our rules do not allow it, unless you are engaged. Are you engaged to Mr. Bellfair?" "No; not exactly; but if you let me go, I shall be by the time we get back."

"Do you believe in a third party?" asked old Dimming (referring to the political situation) of his daughter's beau, as all three sat in the parlor. "Well," replied the young man, who had not called to discuss politics, "I wouldn't have thought of asking you to retire; but since you mention it, Mr. Dimming, I will say that it is the general belief that two are company."

"I don't believe I quite understand your contention," said the judge to the bicyclist; "it seems that the prisoner is a house-mover; that he was moving a small frame house at the time of the trouble; and that you, who have been engaged to him, have been so kind as to move the house." "But, your honor," protested the bicyclist, "I rang my bell when I was half a block away, and he paid no attention to it."—Detroit Journal.

## How Spurgeon Learned to Smoke.

It has never been stated yet how and when Mr. Spurgeon learned to smoke. It was while he was an usher in a boys' school at Cambridge, and became the pastor at the Little Baptist chapel at Waterbeach. He used to stay with one of the deacons from Saturday to Monday. Admiring the zest with which his host enjoyed his clay pipe, a "churchwarden" was procured him the following week, which offer he eagerly accepted. Said the old man: "He smoked his pipe, as he did everything else, thoroughly, then he said: 'I think I have had enough.' 'Yes,' I replied, 'I think you have,' and he thereupon left the inside for the outside of the cottage."

## Thames Rivers.

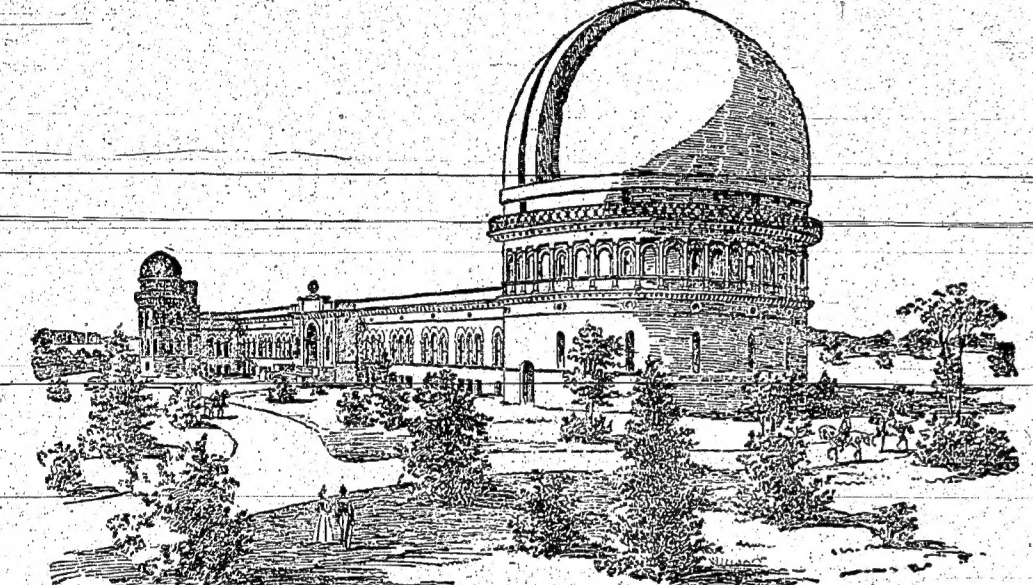
The Thames of England is 170 miles long. The river of the same name in Canada is said to be 430 miles long. Its nameless in the United States is hardly more than a dozen miles in length, but is better for navigation than either.

## License Fees in St. Louis.

License fees on 1,135 occupations amount to \$1,350,000 a year in St. Louis.

## Silk in Madagascar.

In Madagascar silk is so cheap that it is the only fabric used in the manufacture of clothing.

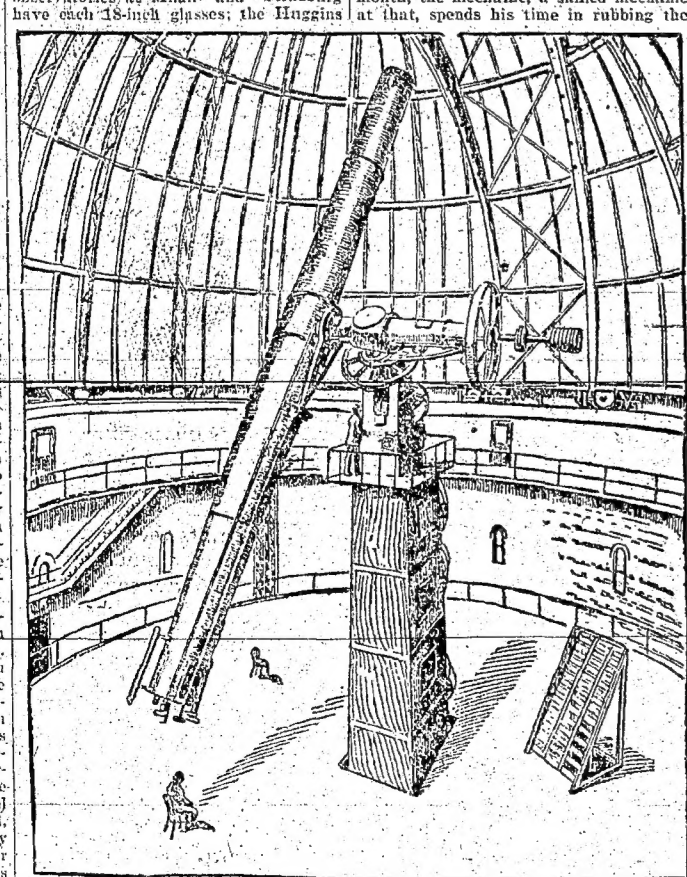


THE YERKES OBSERVATORY OF THE UNIVERSITY OF CHICAGO AT WILLIAMS' BAY, WIS.

the great equatorial is suspended is covered with an iron dome 90 feet in diameter and 60 feet in height. The tube of the telescope has a length of more than 60 feet, and is hung upon supports whose foundations of solid granite sink deep into the earth. The dome is placed upon thirty-six wheels, each a yard in diameter, and is moved in any desired direction by machinery, while there is a movable floor which, by very clever mechanism, can be made to rise or fall so that no matter at what angle the telescope may be set the observer can stand on the floor to do his work or seat himself in a chair, lifting the floor from time to time as may be necessary.

The unfatigued should understand that when a telescope is fixed upon a star, the instrument does not even for a moment move more than a minute, unless special provision is made for moving the telescope with the apparent motion of the star. The star really stands still, but the motion of the earth upon its axis is constantly placing the telescope out of focus; and, therefore, means have been devised by which the telescope can be moved at a rate equal to that of the apparent motion of the star, so that when the object is once in focus, and the clock work which moves the telescope is started, the instrument will follow the star from dark until dawn, thus giving ample time for observations of any length. As in spite of the wonderful mechanism used in the work a large telescope is not easily moved, the star to be observed is first located by means of the "finder," a much smaller telescope, and the location in the heavens of the object being ascertained. The great telescope is then moved according to the scale of a graduated circle placed just beneath and an exact focus is obtained. The Yerkes telescope is fully equipped with every modern invention, not only for observing, but also for recording the observations. Photographic and spectroscopic apparatus may be connected with the telescope in such a way as to make, with the aid of this instrument, the most delicate records of the appearance of the celestial lights and ascertain their composition.

What may be expected from the new instrument is indicated by the information gained on the first evening of observation. The instrument was turned on the moon as the nearest, and, in many respects, the most interesting of our celestial neighbors. Considerable excitement has been aroused in astronomical circles by reports from Paris that the observers there detected, on the first evening, a corresponding increase of knowledge with regard to this remarkable planet, and the public interest aroused through the discoveries of the astronomers and the speculations of imaginative writers, has led to a lively demand for further information which



THE YERKES TELESCOPE.

telescope in London is 15 inches, while at Poulkova, in addition to the 30-inch glass, there is also a 14-inch glass, of similar size being located at observatories in Paris, Lisbon, Brussels and Bordeaux; glasses of 13-inch and less are numerous in Europe, but less so than in America, for in facilities for astronomical observation we, as in most other respects, lead the world.

The greatest reflecting telescopes in the surface of the glass. He cannot see that he has made any progress from month to month; for within a few weeks after he has begun the glass appears brightly polished is possible, but the skilled eye of the superintendent can detect the difference between the highest polish attainable and any degree below that. It is not only, however, for the sake of the polish that the workman labors, for the glass must be worn away to the required di-







## MORNING AND NIGHT.

A little space of pleasure—  
A little space of pain,  
And then the solemn darkness,  
And then—the light again!

A little song and story  
In sunlight and in rain;  
A little gleam of glory  
And then—the dark again!

And so it goes: The darkness,  
And then the gleam of light;  
And so, life is good morning,  
With sad thoughts of good night!

—Atlanta Constitution.

## The Miser's Secret.

Old Miser Furgis was dying. In a large, bare, desolate room he lay, staring wildly at the dull walls and dingy ceiling. No one entered his room unless requested, save his wife, who clung faithfully to his side. His children, for whom he had never exhibited any great show of affection, and whom he seemed to look upon as so much property to be made the most of—stole cautiously to the room occasionally and peered in.

Miser Furgis, as he was known throughout the country, had lived in the old rambling house, in which he was dying, for thirty years. During the time he had cultivated the fertile acres that lay about it. He had worked like a slave and forced his children to work, lived like the poorest laborer, that he might hoard his hard-earned gold. Now he was dying, and he alone knew where it was buried.

One morning, after having lain unconscious for days, he opened his eyes and turned them searchingly about the room until they rested on his wife. As they lingered finally on her there was a tender light in them that told of love.

"Lucy," he began in a faint, hollow voice, "I feel that I can't live much longer. I am dying, and before I go I want to tell you a secret—ask you and the children to forgive me for the cold, hard life I have caused you to live. You will forgive me—when you know all. Call the children—I am going fast."

The family gathered hurriedly about the bed. The miser asked to be lifted to a sitting position, and continued:

"Children, when you know the secret that I am about to disclose, you will forgive my seeming unnatural—be stopped and writhed in agony as some great pain took hold of him. Trembling violently, he sank back among the pillows. Then with a mighty effort he gasped: "You'll find it all on—on—"

After another spell he tried again to speak.

"Don't sell the farm," His features relaxed; there was a tremor, and the miser was dead.

The miser was scarcely beneath the sod before his children began the search for his hoarded gold. Now that he was gone, and had sought in his last hour to make reparation, they thought of him kindly. They forgot his asperities as they thought of the treasure he had left them. Now it was all theirs. It never occurred to them that the prize might elude their most careful and persistent search.

So confident were they of success, and so pleasant was the contemplation of their fortune, that Albert, the youngest, sat down with pencil and paper to figure out the amount their father had accumulated in the last thirty years.

His calculation was something like this: The farm averaged an income of at least \$5,000 a year for the last five years. The next five the average would be \$1,000. The next ten \$1,500, and to his own knowledge the profits the last ten years had been \$3,000. Fifty thousand dollars would be a fair estimate.

"O—that was the only clew. The second story of the building was carefully gone over; then the attics, but nothing but cobwebs and accumulated dust and rubbish was found. Then the grounds were gone over again, each time more slowly and carefully, special search being made on every eminence. But it was always with the same disappointing results.

Years passed, and the miser's gold lay secure in its hiding place. They who sought it continued hopeful, and with the exception of short intervals of rest, they had kept diligently at work.

The farm during this time had been left to take care of itself and produce whatever crop it saw fit; consequently the fertile acres were covered with a dense growth of weeds and briars. The stock had been sold off a few at a time, until only a small number of broken-spirited horses remained, with which to cultivate the patches necessity forced them to till.

As the years continued to slip away, Mrs. Furgis died. Soon Albert followed her and the two remaining children were left alone in the large, decaying house. Harold and his sister continued to work the patches about the house, and year after year mortgaged a few acres of land for money to pay taxes, not daring to sell or rent, for fear their treasure would fall in other hands than their own. Through the long years of foolish and profitless search it never occurred to them, or if it did, was not acted on, that in the farm they had a fruitful and unfailing source of revenue.

One day early in June as Harold sat on the moss-grown stoop, gazing dreamily out on the luxuriant and tangled undergrowth, a peddler crossed the stile and labored slowly beneath a pack along the paved walk.

"Would you like to purchase a divining rod?" he asked, placing his pack on the ground. He held out a polished metal rod that flashed brightly in the sun.

"What is it for?" asked Harold, taking the rod in his hand and examining it closely.

"To find minerals; hidden treasure—gold and silver."

"How is it used?" he asked, striving to retain his curiosity.

The peddler carefully explained the manner of operating it, and again emphasized its occult power of divination.

"Have you sold many?" asked Harold.

"Not near here," returned the trader; "have just reached this section."

"Name your lowest price for the entire lot," said Harold impatiently, "and

promise not to sell any more in this county, and I'll buy them."

A bargain was struck. The peddler walked off, laughing in his sleeve over the fine sale, and Harold hurried with his purchase to his sister. Their flagging hopes and energies became again buoyant.

At all hours they could be seen; rods in hand, walking with careful step and bowed head around the plantation.

It was a strange, weird picture to see the little, slender woman and the tall, gaunt form of her brother as they pushed their way through the tangled bracken, their eyes riveted on the ground at their feet. Specter-like they traversed the summit of the mound and hill, stalking through field and pasture, and crept in the silence and shadows of the woodland. It was a sad sight to see the twin at nightfall, exhausted with their ceaseless tramp, sit down sullen, dejected and disappointed to their niggardly meal in the gloom of the old house.

Intercourse with their neighbors had almost ceased, for they were so busy one evening when they found themselves face to face with one of their father's old friends. The presence of any person in the house seemed almost an apparition. The visit was prompted by a kindly feeling of interest, and their visitor protested mildly but earnestly against their folly, urged them to stop their search, and to turn their attention to their own affairs. Harold listened respectfully, thanked his visitor for the show of good will, but asserted positively his intention of keeping his search.

Not many days after the visit just recorded Harold, while prospecting on the top of a hill, was sure his rod gave indications of a mineral deposit. All a-tremble he tried the spot a second time. Yes, he was sure, the rod dipped to the earth. He marked the place and crept stealthily away. Seeking his sister, he told her that the treasure was found. At nightfall they would go forth and bring it home.

Armed with pick and shovel, they stole warily out through the darkness, casting furtive glances about them to make sure they were not watched. At last they stood above the precious spot. Harold pushed aside the dead leaves and grass, and began to dig away the mellow earth. Deeper and wider grew the excavation; fainter and fainter throbbed their hopes; lower and lower waned the moon, until the delvers stood pale and faint in the gray of morn.

That evening Harold and his sister sat moodily in the room in which their father had died. They had always avoided the room, and now they wondered at their presence in it. Some strange fascination was upon them. They were growing morbidly superstitious of late. A candle sputtered on a table between them, illuminating feebly the darkness. The white covering of the bed on which the miser died loomed faintly in the shadows and looked not unlike a crouching ghost about to spring from the gloom. Harold gazed intently at the blurred drapery until the whole scene flashed on him again; he could see his father's face distorted in death agony and hear the whispered words drop from his lips. He sprang to his feet, exclaiming harshly, "On, on!" Then turning to his startled sister he asked:

"What do you think what father would have said after 'on'? See if you can't; put your head to work. This is the point at which we should have started long ago."

After thinking, with knit brow, in silence for a spell, he began: "On, on top of—on, on, on, upon the—on top of the—on, on what, sister? On the top of the what? We ought to guess what would come next. On, on!" he looked searchingly about the room—"on—the clock," he cried, springing to his feet as his eyes rested on the face of an old, silent cuckoo clock in the corner. "It's there, Hattie; don't you remember how father started at the clock when he was dying? Yes, we'll find some clew on the clock. I have a presentiment that our disappointing quest is at an end," he continued, nervously mounting a chair. His sister stood at his side, holding aloft the flickering candle. Harold was feeling in the dust and cobwebs when the old clock gave a groan, the cuckoo came to the door and repeated its hollow note; there was a harsh screeching, and the dilapidated timepiece tumbled in a heap. There was a shriek; the candle fell spluttering to the floor, and the two ran like guilty things from the room. They stood in the empty hall for a moment, panting with fright and peering turvintly into the dark; then hastened to their apartments.

Morning was stealing gray and shadowy through the quiet old building when Harold stole down the stairway to where lay scattered the wreck of the old clock. He searched amid the debris, and brought to light a bit of yellow, time-stained paper. He brushed the dust from it and read, in a cramped handwriting, the words, "To my wife."

At last, there was no hurry now, Harold was perfectly calm as he pushed the paper in his pocket and stepped to the stairway to call his sister. She came down presently, her heart all a-flutter with agitation.

"Harold, have you found it?" she asked, huskily.

He bowed his head, and the glow of triumphant satisfaction on his face was pitiful. He led his sister gently along the hall to the old rotting stoop. Here they sat down in the crimson glow of sunrise and Harold opened the letter.

"DEAR WIFE—In trying to atone for one sin I have been guilty of another—perhaps a greater. But, when you know all, I am sure you will forgive me. I will be brief: When a child I was left an orphan. A wealthy and childless couple adopted me. I was reared in luxury, and when I was old enough I was sent off to college. While there made the acquaintance of some dissipated young men, and soon learned to drink and gamble. It was not long until I was deeply involved in debt—debts of honor, as they were called. I was ashamed to ask my foster-father for the large sums I needed, but being threatened with exposure I promised to satisfy my creditors on my return from my vacation; if they would wait."

"Banks were not as common then as now, and I had learned that my father kept his money in an iron box in the study. His keys he always carried with him. The night before I was to return to school I stole to his room and secured them. I had intended to take only a sufficient sum to pay my debts, but when the chest with its

treasure lay open before my eyes, a wicked impulse overmastered me, and I decided that it all should be mine. I packed the money in my portmanteau, locked the box, fastened the study door, returned the keys to my father's pocket, and, returning to my room, waited impatiently the coming of day. It chanced the following morning, it being a busy season, that a servant could not be spared to drive me over to the railroad. I was to go over alone and the team sent for later.

"There was a swollen stream on my route, and as I drove in sight a scheme occurred to me that I had not thought of. I stopped the buggy at the water's edge, and, lifting my grips to the roadside, cast the reins over the dashboard, and then gave the horse a cutting lash. They plunged with a bound into the muddy water. I watched them until they reached the further shore, and then concealed myself in the woods. They would think me drowned and mourn me as dead."

"That night I walked to a distant station and took a train for the West. After years of wandering, ever stung with remorse, I came to this place and opened my farm. I resolved to make what restitution was possible, the larger part of my ill-gotten wealth by the time having been squandered. So scant was the living that I took from my farm I soon became known as Miser Furgis. I was glad, for it made me more secure in my purpose and my concealment. I sent the proceeds of each year's crop to the widow of my foster-father, for he had died soon after my flight. I have, at last, returned every dollar of the stolen money, and the farm, free from incumbrance, is yours. This is my story. I need not speak of the remorse, the fear, the suppressed love that I have felt all the sad years. Forgive me, and think of me as your loving husband."

J. H. Furgis.

The paper fell fluttering to the steps. A breath of air caught and whirled it out over the tangled weeds. Harold gazed for a moment toward the sun, then his head sank to his knees and a groan burst from his lips. His sister was weeping silently, her head on his arm. Motionless, silent they sat for minutes, then Hattie, looking up through her tears, said softly: "Brother, I never dreamed that it would be like this."

There was no answer. He rose and staggered into the shadow of the doorway.

For weeks there was not a sign of life about the old ruins. But one bright morning Harold came forth a new man, and went energetically to work. Now the tenant houses are occupied, the farm "blossoms as the rose," and a handsome modern structure crowns the eminence.

Harold and Hattie found where their treasure lay hid.—New Orleans Times-Democrat.

### How Worry Affects the Brain.

Modern science has brought to light nothing more curiously interesting than the fact that worry will kill. More remarkable still, it has been able to determine, from recent discoveries, just how worry does kill.

It is believed by many scientists who have followed most carefully the growth of the science of brain diseases that scores of deaths that are set down to other causes are due to worry, and that alone. The theory is a simple one—so simple that any one can readily understand it. Briefly put, it amounts to this: Worry injures the brain and the brain being the nutritive center of the body, the other organs become gradually injured, and when some disease of these organs, or a combination of them, arises, death finally ensues.

Thus does worry kill. Insidiously like many another disease, it creeps upon the brain in the form of a single, constant, never-lost idea, and, as the drooping of water over a period of years will wear a groove in a stone, so does worry gradually, imperceptibly, but no less surely, destroy the brain. Cells that lead all the rest—that are, so to speak, the commanding officers of mental power, health and motion.

Worry, to make the theory still stronger, is an irritant at certain points, which produces little harm if it comes at intervals or irregularly. Occasional worrying of the system the brain can cope with, but the iteration and reiteration of one idea of a disquieting sort the cells of the brain are not proof against. It is as if the skull were laid bare and the surface of the brain struck lightly with a hammer every few seconds, with mechanical precision, with never a sign of let-up or the failure of a stroke.

Just in this way does the annoying idea, the maddening thought that will not be done away with, strike or fall upon certain nerve cells, never ceasing and week by week diminishing the vitality of these delicate organisms that are so minute that they can only be seen under the microscope.—Pharmaceutical Products.

### A Model Railway for Practice.

An education model railway, copying accurately the working details of the London & Northwestern railway, has been built in London for Mr. Percy H. Leigh, of Worsley, Manchester, who intends mounting it on trestles in a specially built hall in his home. The main line has a double track 90 feet long, with sidings of 50 feet, also double. The track is of six-inch gauge, with double-headed steel rails, cast iron chairs, and a couple of turn tables; and the sidings are fitted with suitable switches, points, locking bars, signals, etc. The sign boards have 14, 8 and 4 levers respectively. There are two stations, with the usual waiting room, ticket office, etc.; a foot bridge for passengers, and a bridge for carrying a road over the line; and even a cutting and a tunnel. The rolling stock, made to scale, consists of a passenger and freight train, each with the different styles of cars now in use. Brakes, buffers, couplings, grease boxes, etc., are all exact models, and even bolts, springs, etc., are perfectly represented, while the curves of the road have the outer rails at the correct elevations, with extra rails where they would be considered necessary. The locomotive, a modern four-coupled engine, with a leading bogie, has reversing gear, whistle, water gauge, etc., precisely as in the original.

The Crystal Palace at Sydenham, England, will hold 100,000 people.

## ROOF OF THE WORLD.

### AN UNKNOWN COUNTRY AND ITS STRANGE INHABITANTS.

Lassa, in the Land of the Lama, the impenetrable Mountain Realm of Tibet—its People Are Savage and Depraved.

A few years since, two Russian explorers, MM. Mekhikhodjoff and Oulanoff, arrived at Shanghai after a journey of two years and nine months through Tibet, in the course of which they penetrated to the capital, Lassa, and had actually had an interview with the great Dalai Lama himself. The wonderfulness of this feat can only be appreciated in the light of the knowledge that no European has ever before entered the Land of the Snows, the memory of the living world. The few explorers who have dared the perils of the wild and snowy changes, lofty plateaus, the robber Dolpas or dwellers in black tents, the Chinese guards and the Tibetan soldiery, have only succeeded in struggling through dreary miles of deserts and along monsoon-swept marshes, and have returned with only half-glimpsed descriptions of the innumerable monasteries, the prayer-mills or rattles and the buttered tea of this unique and most unknown country.

This impenetrable barred Lassa is the dwelling place of the Dalai Lama, the chief priest of Tibet and Mongolia. This religious pretender is worshipped as the earthly incarnation of Buddha. Incense is burned to him before a gigantic idol of the god of Jambou, a monstrous image of clay and gilt with jeweled head, which sits enthroned in the great white palace of the Potala. Lamaism is a hybrid Buddhism, just as Mohammedanism is a hybrid Christianity.

The utter exclusion of all foreigners from this strange land has been and is undoubtedly due to the fear of the Tibetan hierarchy of priests that this absurd imposition of their red and yellow religion, which has completely enslaved the Tibetans, might be speedily overthrown by the Christian "devils." They are afraid the wealth of the monasteries would be revealed. At present the priests own Tibet as absolutely as though they held fee-simple to every foot of its ground. The Chinese empire holds a nominal temporal sway, but dares not—if it would—disturb the Dalai Lama, and his army of priests. MM. Mekhikhodjoff and Oulanoff are the first travelers who have gazed upon and entered that city hitherto as inaccessible to the north pole.

The immense territory of Tibet is almost completely surrounded by mountain ranges of appalling magnitude, which, especially along the southern, western and northern frontiers, constitute formidable barriers against ingress. From the Pamir plateau, in the extreme west, "the world's backbone" radiate the great natural ramparts, which shut India on the one hand and the Tartar countries of Bokhara and Turkestan on the other. No Asiatic or western conqueror has even dared to penetrate this mountain world, and even Genghis Khan, the scourge of Asia, whose ravages extended from Pekin in the east to Moscow in the west, was obliged, when invading northern India, to take the circuitous route via Kashgar and Agharistan, instead of crossing Tibet. Secure on their lofty plateau, and practically isolated from the rest of the world, the people have remained undisturbed for ages, and have developed characteristics for which we would vainly search in any other race of the globe.

The Tibetans occupy a very low position in the scale of human advancement, especially if judged from our western standard of civilization. Their culture is inferior to that of most semi-barbarous races, comparing unfavorably even with that of certain Indian tribes of the American continent, such as the Pueblos, Zunis, etc. In physiognomy and general appearance they strongly resemble the inhabitants of Swedish Lapland, as well as the Eskimos of Northern Siberia, being short-sized, broad-shouldered and possessed of the same angular Mongolian features. Indeed, the Tibetans are, perhaps, the most ill-favored of Turanian races. A close interbreeding during many centuries of isolation has produced a striking facial similarity, and has developed a peculiarly repulsive normal type of countenance. A broad, very low forehead, excessively prominent cheek bones, oblique eyes, and coarse bristly black hair are characteristics which do not materially enhance the beauty of the "human form divine," but the most singular peculiarity of the Tibetan face is the almost total absence of the bridge of the nose. Among a dozen Tibetans, chosen at random, hardly one will be found whose nasal organ is not so completely flattened or sunk in the middle as to be practically level with the eyes. Seen in profile such a face presents a ludicrous appearance.

With the tip of the nose sticking out like a solitary beacon. But a compensatory providence has added to the ears what is lacking in proboscis circumference, and it is but fair to state that the auricular appendages of the average Tibetans are of generous size.

The Tibetans are absolutely without gratitude. They will demand tremendous rewards for feeble services, steal everything within sight, regard politeness and gentleness as indications of cowardice, and merely refrain from stabbing their guests, because their courage fails them. Poisoning is popular, and the Tibetan is so suspicious of his own countryman that he will drink and eat nothing until his host partakes plentifully before him. The character of all the Tibetans, settled and nomadic is the same—cowardly, faithless and immoral. They are servile to the brave, insolent to the fearful and mere tools in the hands of the lamas, or monks. They are false to their best friends, as is witnessed by their desertion of the French missionaries who have been their most constant helpers.

Their physique is notably good, and they stand cold and hunger admirably. They are active, and at first view, lighthearted and genial; but in reality are cunning, foul and unlovable. They are very unclean, rarely or never bathing their persons. The dress of the common people consists of a very dirty, greasy sheepskin robe which they use as bedding at night. The taste for trading is very strongly developed, and they seize every opportunity to make money. Vast quantities of tea are consumed by them, and they enjoy it, especially when mixed with butter and salt. Their tea is sold in bricks and is of a very inferior quality. During all discussions of state and in their ordinary assemblies, each man has a cup before him which is continually replenished.

The population of Tibet proper and Chinese Tibet is 8,000,000. Looking at the enormous stretch of country over which these millions are distributed, it is apparent that the country is very sparsely populated.—Boston Transcript.

### A DECLINING INDUSTRY.

Same Skill No Longer Required in Making Famous Straw Hats.

A strike in the gentle, smiling valley of the Arno, says a Rome correspondent of the Pall Mall Gazette, has drawn attention to the straw-plait industry there. It is one that is greatly affected by change of fashions, and has its periods of prosperity and depression. The days have gone by when this property about Florence was divided among a few manufacturers of straw hats (what the English call Leghorns), who when marrying their daughters gave them a dot of several thousand scudi, (each scudi being worth four shillings), and a straw hat, the strands of which, less than a milligramme in weight, were made of straws so fine that, after being woven, a magnificent class was needed to distinguish them. Now rich travelers travelling through Florence go no more to the Via Porta Rossa to pay 100 francscento (222 for a straw hat to take home as a present).

Fashion has transformed the Florence straw industry. The profit now comes from the quantity, not the quality; and consequently the hand work at one time sought after and well paid has gradually decreased in price until the wages of the workers are pitiful. When the wholesale price of a hat, all made and sewed, is a penny or two—and there are those at even a lower price—it is easy to imagine what compensation the straw-workers get for the twenty-five to thirty-five yards of made strands which are necessary for one hat.

The skill formerly required in the plaiting is, however, no longer required. Once it was an art, now every one can do it—the boys and girls who drive the cattle to pasture, the women at home, beggars, all those who have nothing else to do. In the mountains the men who break stones have been seen at straw-plaiting in their few leisure moments, and even men who drive coal carts. This "vulgarization" and overproduction will, in the end, be the death of the industry. There have been immense exportations, especially to America, and, consequently, an overstocked market, and until some means are found of diminishing the production the industry will go from bad to worse, with the gravest consequences to those who live by it.

There are exporters who buy the straw plait in bulk, paying if not sufficient for the work, more than is warranted by their own profits, and who only continue the business out of charity for the poor people of the district. But this in many cases does not prevent them from being accused of profiting by the necessities of the workers. Hence the strike.

Another misfortune for this industry is the new United States tariff, which raises the duty on worked straw from 25 to 35 per cent of its value. Besides the Italian productions have to struggle in America against the competition, increasing day by day, of the Japanese and Chinese straw. The look is indeed dark, for no matter how the poor Florentine straw-plaiters protest and strike, they have no remedy. It is a question of overproduction for a constantly diminishing market.

### Miles and Knots.

A statute mile is 5,280 feet. It is our standard of traveling measure, adopted from the English, who in turn adopted it from the Romans. A Roman military pace, by which distances were measured, was the length of the step taken by Roman soldiers, and was approximately five feet long; a thousand of these paces were called a Roman mile. The English mile is therefore a purely arbitrary measure, enacted into a legal measure by a statute passed during the reign of Queen Elizabeth; it has not connection with any scale in nature.

A nautical mile, on the other hand, is equal in length to one-sixtieth of the length of a degree of a great circle of the earth. But the circumference of the earth is nowhere a true circle; its radius of curvature is variable; hence, the nautical mile as a matter of fact, depends for its length upon the shape, as well as the size of the globe sailed over; and hence, strictly speaking, the length of the nautical mile should vary with the latitude from 6,080 feet at the equator to 6,100 feet at the pole. Such extreme accuracy is not necessary in navigating, and cannot be well attained without any undue labor.

The English Admiralty, therefore, have adopted 6,080 feet as the length of a nautical mile, which corresponds with the length of one-sixtieth of a degree—or one minute of an arc—of a great circle in latitude 48 degrees.

The United States Coast Survey has adopted the value of a nautical mile as "equal to one-sixtieth part of the length of a degree on the great circle of a sphere whose surface is equal to the surface of the earth." This gives the length of one nautical mile as equal to 6,080.27 feet, which is very nearly the value of the Admiralty mile adopted in the English navy. Practically the nautical mile is 800 feet longer than the statute mile. In other words, the nautical mile is equal to 1.151 statute miles; or one statute mile is equal to .869 nautical miles. Multiply nautical miles by 1.151, or divide statute miles by .869, and the product will be nautical miles.

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Stupid Color Blindness.

Professor Holmgren of the University of Upsala, who has just died, established the first physiological institute in Sweden. He was chiefly known through his researches on color blindness, and his plan of testing the color sense by means of wools.

## NOTES AND COMMENTS.

At last Mr. Henry M. Stanley has emerged from the matrimonial obscurity into which he plunged some five years ago.

A farmer in Madison County, Indiana, announces that he has discovered a new corn. Well, he'd better look after it a little before it becomes too troublesome.

There are now twenty-seven societies in the United States membership in which depends on descent from ancestors who distinguished themselves by coming over to America at an early date, or by being participants in American wars prior to 1861.

Lake City, Florida, has set out to make the dancer pay the fiddler in a novel way. The town has appointed a single night watchman and decreed that he shall be paid at the rate of \$2.50 for each arrest made, the prisoner to furnish the money.

"Until recently," remarks the Boston Transcript, "we believed that oxygen rendered the protoplasm of the organ phosphorescent with disengagement of the phosphoretted hydrogen." It is indeed a sweetly solemn thought, brother, that at last you have been set right upon that all-important matter.

The gold production of 1897 is likely to exceed that of 1896, which was the largest in the history of the world. Advices from Ecuador show that mines being developed there are reported richer and more extensive than those of South America; where such enormous quantities of gold have recently been produced.

In the French navy it has been found that the electric search-light employed on men-of-war injuriously affects the eyes of seamen who have to work about the light, and dark blue spectacles are supplied to them for protection. Brown eyes are less affected than gray or blue ones, the reason suggested being that the former are more heavily charged with pigment.

A Philadelphia policeman the other day arrested a little boy in knee breeches, to the great indignation of some bystanders, who went to the station house to make a complaint against the policeman. At the station they learned that the little boy was "Dublin Joe," a notorious pickpocket, forty years old, and that his pockets were filled with other people's money. No complaint was entered.

A young student in a certain theological seminary recently persuaded a fellow-student to listen to him while he rehearsed a sermon. His subject was "Light." With a violent gesture with the right arm he said, "Blot out the sun." With a similarly frantic movement of the left arm he roared, "Blot out the moon!" Then, with a combined gesture made up of both arms, he bellowed, "Blot out the stars!" But it was enough. The auditor arose to leave with a hoarse, cruel whisper, "Turn off the gas."

In the single State of Massachusetts there are more than 1,200 miles of electric railway, while in England, Scotland and Ireland combined there are only 200 miles. Moreover, nearly all the electric roads in the British Islands have been built and equipped by American contractors. This country has led all others in the use of electric power for traction purposes, and the construction of similar railways in other nations is conducted almost exclusively in accordance with American models and methods.

A Cincinnati firm of contractors is making considerable trouble among business men of its class in that city by its unusual methods. One of the firm is an old circus man, and being well acquainted with the capacity of elephants for work, he secured one of the animals, which is now used on the firm's contracts for grading. The monster is hitched to an immense plow, saving the work of ten horses and five or six men, and the firm for which he works is thus enabled to underbid all competitors because of the saving made.

In commenting on the automatic hot-water supply now furnished in certain parts of London by dropping a penny in a slot machine attached to a lamp-post, "The London Telegraph" suggested that food may soon be furnished in the same way. Whereupon a correspondent writes: "It may interest some of your readers to know that the problem is already solved, and that in the exhibition grounds, at Brussels there is a cafe which provides hot and cold luncheons entirely by the automatic method, and I can say from experience that they are very good. By placing a franc in the slot a chop or steak, with potatoes, can be procured, hot and well cooked; another franc will produce a half-bottle of wine; half a franc will supply a plate of cold meat, with salad and roll, and a nickel of ten centimes will extract a piece of bread and butter and cheese, or a 'brioche.' Besides all this a nickel will draw an excellent glass of beer from one of the two large vessels in the centre of the cafe."

Again the important question, "How Long are Women Beautiful?" is discussed in an English journal, one writer maintaining that "the fullness under the age of thirty-five or forty." This claim is disputed by another writer, who cites the opinion of women themselves, as shown by the undoubted fact that "any woman who craved admiration on the score of her personal appearance would be vastly more pleased were her age to be guessed as being thirty rather than forty." Well, it all depends, as Pitti Sing would observe. "The race and the woman must be considered. In some tropic lands women are either wrinkled and shriveled or fat and shapeless grandmothers before they reach the age mentioned. In England and in this country it often happens that the 'fullness of beauty' in women 'does not reach its zenith under the limit of thirty-five or forty.' The age limit is very elastic, depending on many things that help to make or mar the beauty which is woman's most coveted possession."

In the Atlantic Monthly the celebrated African explorer announces his return to the literary workshop by discussing at some length the progress of civilization on the dark continent. "Twenty-five years ago," says Mr. Stanley, "the whole of central Africa was nothing more than a continental slave park. To-day it is largely the abode of intelligence